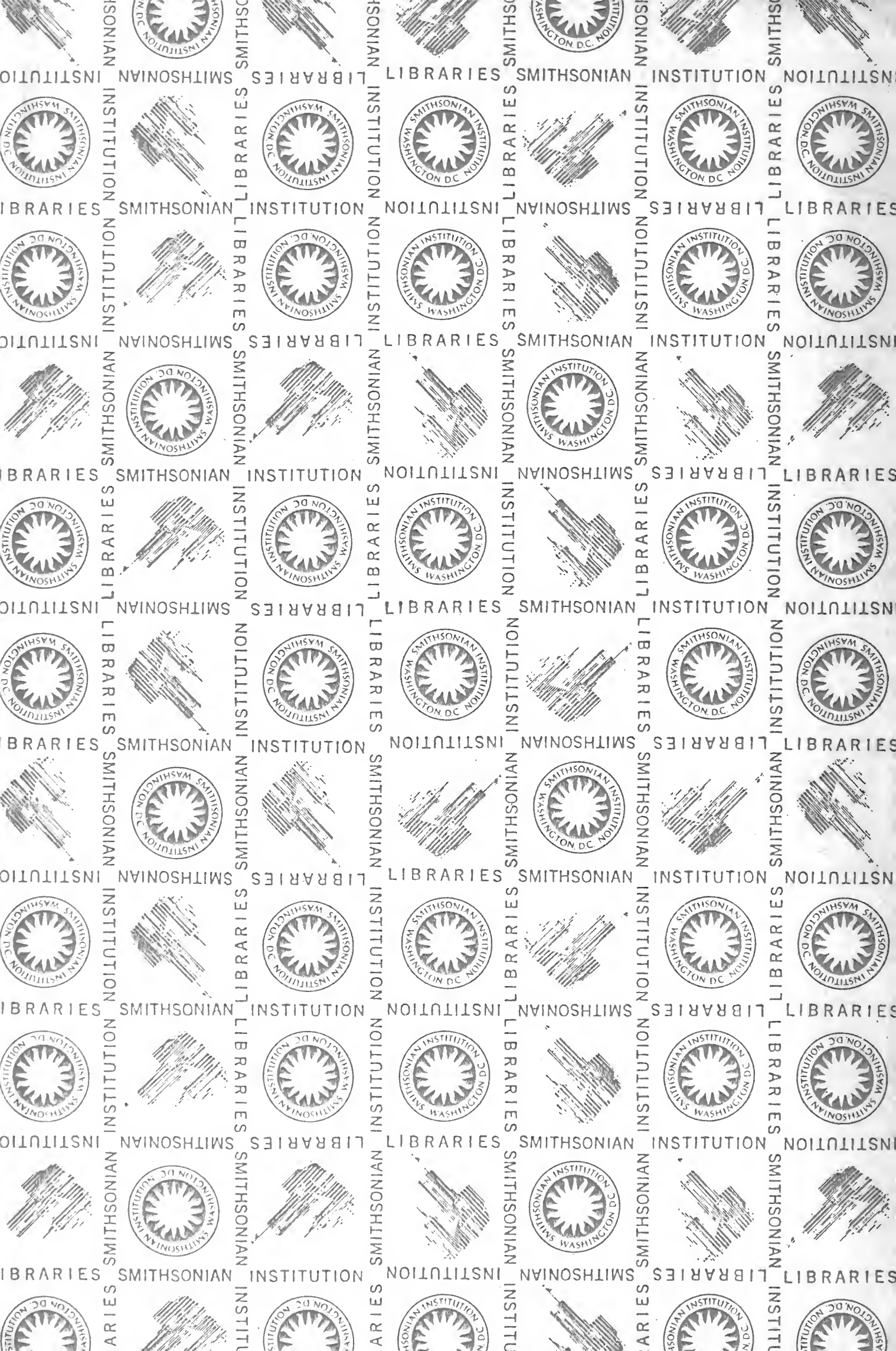
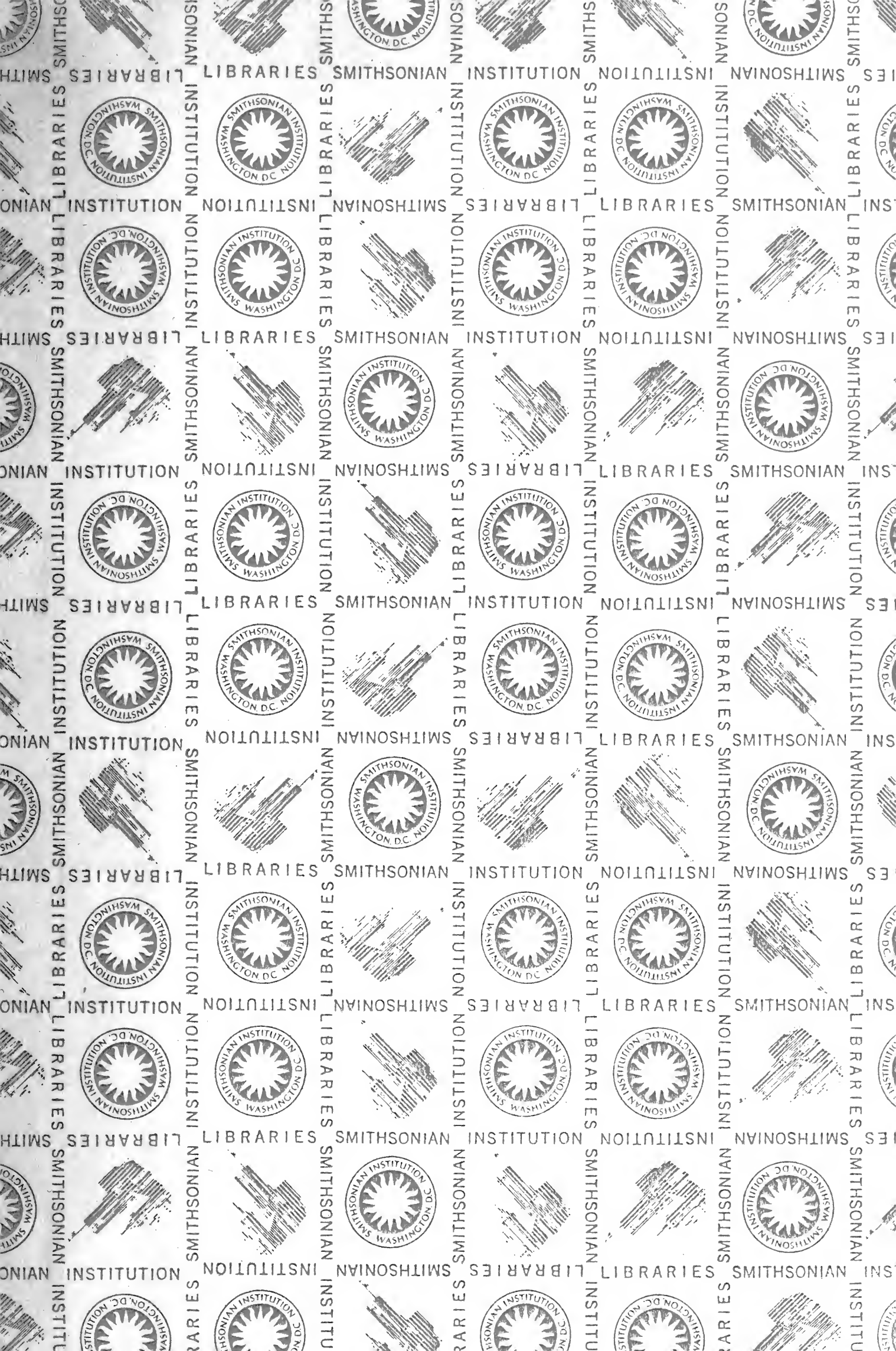


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INTRODUCTION

This Bibliography of Aeronautics for 1931 covers the aeronautical literature published from January 1 to December 31, 1931. The first Bibliography of Aeronautics was published by the Smithsonian Institution as volume 55 of the Smithsonian Miscellaneous Collections and covered the material published prior to June 30, 1909. Supplementary volumes of the Bibliography of Aeronautics for the subsequent years have been published by the National Advisory Committee for Aeronautics. The last preceding volume was for the calendar year 1930.

As in the previous volumes, citations of the publications of all nations are included in the languages in which these publications originally appeared. The arrangement is in dictionary form with author and subject entry and one alphabetical arrangement. Detail in the matter of subject reference has been omitted on account of the cost of presentation, but an attempt has been made to give sufficient cross-reference for research in special lines.

JOSEPH S. AMES,

Chairman National Advisory Committee for Aeronautics.

NOVEMBER 23, 1934.

II



ABBREVIATIONS

Aer. Eng. Suppl. The Aero-plane.	The Aeroplane— . . . Aeronautical Engineering Supplement to The Aeroplane, London.
Aer. Res. Comm., Rep. Mem---	Aeronautical Research Committee, Reports and Memoranda, London.
Aeron. Journ-----	Aeronautical Journal, London.
Aeronautics, Techn. Rep. Aer. Res. Comm. .	Aeronautics. Technical Report of the Aeronautical Research Committee, London.
Amer. Mach-----	American Machinist, New York.
Ann. Soc. Mét. France-----	Annuaire, Société Météorologique de France, Paris.
Atti Assoc. Ital. Aerotecn-----	Atti dell'Associazione Italiana di Aerotecnica, Roma.
Aut. Mot. Flugw-----	Automobil-Motorrad-Flugwesen, Berlin.
Automotive Ind-----	Automotive Industries, New York.
Bull. Aero-Club Suisse-----	Bulletin, Aero Club Suisse, Berne.
Bull. Exper. Depart. Airplane Eng. Div.	The Bulletin of the Experimental Department, Airplane Engineering Division, U.S.A., Dayton, Ohio.
Bull. Féd. Aér. Int-----	Bulletin Fédération Aéronautique Internationale, Paris.
Bull. Soc. Enc. Ind. Nat-----	Bulletin de la Société d'Encouragement pour l'Industrie Nationale, Paris.
Deutsche Luftf. Zeitschr-----	Deutsche Luftfahrer Zeitschrift, Berlin.
Ind. Eng. Chem-----	Industrial and Engineering Chemistry, Washington, D.C.
Jahrb. 1929, Deutsch. Versuchsanstalt für Luftfahrt, E. V., Berlin-Adlershof.	Jahrbuch 1929 der Deutschen Versuchsanstalt für Luftfahrt, E.V., Berlin-Adlershof, München.
Journ. Amer. Soc. Mech. Eng--	Journal of the American Society of Mechanical Engineers, New York.
Journ. Frankl. Inst-----	Journal of the Franklin Institute, Philadelphia.
Journ. Inst. Amer. Electr. Eng.	Journal of the American Institute of Electrical Engineers, New York.
Journ. Mil. Serv. Inst-----	Journal of the Military Service Institution, Governors Island, New York.
Journ. Roy. Aer. Soc-----	Journal of the Royal Aeronautical Society, London.
Journ. Roy. Soc. Arts-----	Journal of the Royal Society of Arts, London.
Journ. Soc. Automotive Engineers.	Journal of the Society of Automotive Engineers, New York.
Journ. United States Art-----	Journal of the United States Artillery, Fortress Monroe, Va.
Mech. Eng-----	Mechanical Engineering, New York.
Nat. Aer. Mag-----	National Aeronautic Magazine, Washington, D.C.
Nat. Geog. Mag-----	National Geographic Magazine, Washington, D.C.
Pop. Mech-----	Popular Mechanics, Chicago.
Pop. Sci. Monthly-----	Popular Science Monthly, New York.
Proc. Amer. Inst. Electr. Eng--	Proceedings of the American Society of Electrical Engineers, New York.
Proc. Nat. Acad. Sci-----	Proceedings of the National Academy of Sciences, Washington, D.C.
Proc. Phys.-Math. Soc. Japan--	Proceedings of the Physico-Mathematical Society of Japan, Tokyo, Japan.

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ABBREVIATIONS

Proc. U.S. Nav. Inst.-----	Proceedings of the United States Naval Institute, Annapolis, Md.
Quart. Journ. Roy. Met. Soc.---	Quarterly Journal of the Royal Meteorological Society, London.
Rend. Istituto Sper. Aer.-----	Rendiconto dell'Istituto Sperimentale Aeronautico, Roma.
Rend. Teen. Dir. Sup. Genio Costr. Aeron.	Commissariato dell'Aeronautica. Intendenza Generale. Rendiconti Tecnici della Direzione Superiore del Genio e delle Costruzioni Aeronautiche. Roma.
Rév. Gén. Scien.-----	Révue Générale Scientifique, Paris.
Riv. Aer.-----	Rivista Aeronautica, Roma.
Riv. Ital. Aeron.-----	Rivista Italiana Aeronautica, Roma.
Sat. Even. Post.-----	Saturday Evening Post, Philadelphia, Pa.
Scient. Amer.-----	Scientific American, New York.
Techn. Berichte.-----	Technische Berichte, Charlottenburg.
Zeitschr. Angew. Math. Mech.--	Zeitschrift für Angewandte Mathematik und Mechanik, Berlin.
Zeitschr. Flugt. Motorluftsch.--	Zeitschrift für Flugtechnik und Motorluftschiffahrt, München und Berlin.
Zeitschr. Österr. Ing. Arch. Ver.	Zeitschrift des Österreichischen Ingenieur- und Architekten-Vereines, Wien.
Zeitschr. Ver. deutscher Ing.----	Zeitschrift des Vereines deutscher Ingenieure, Berlin.

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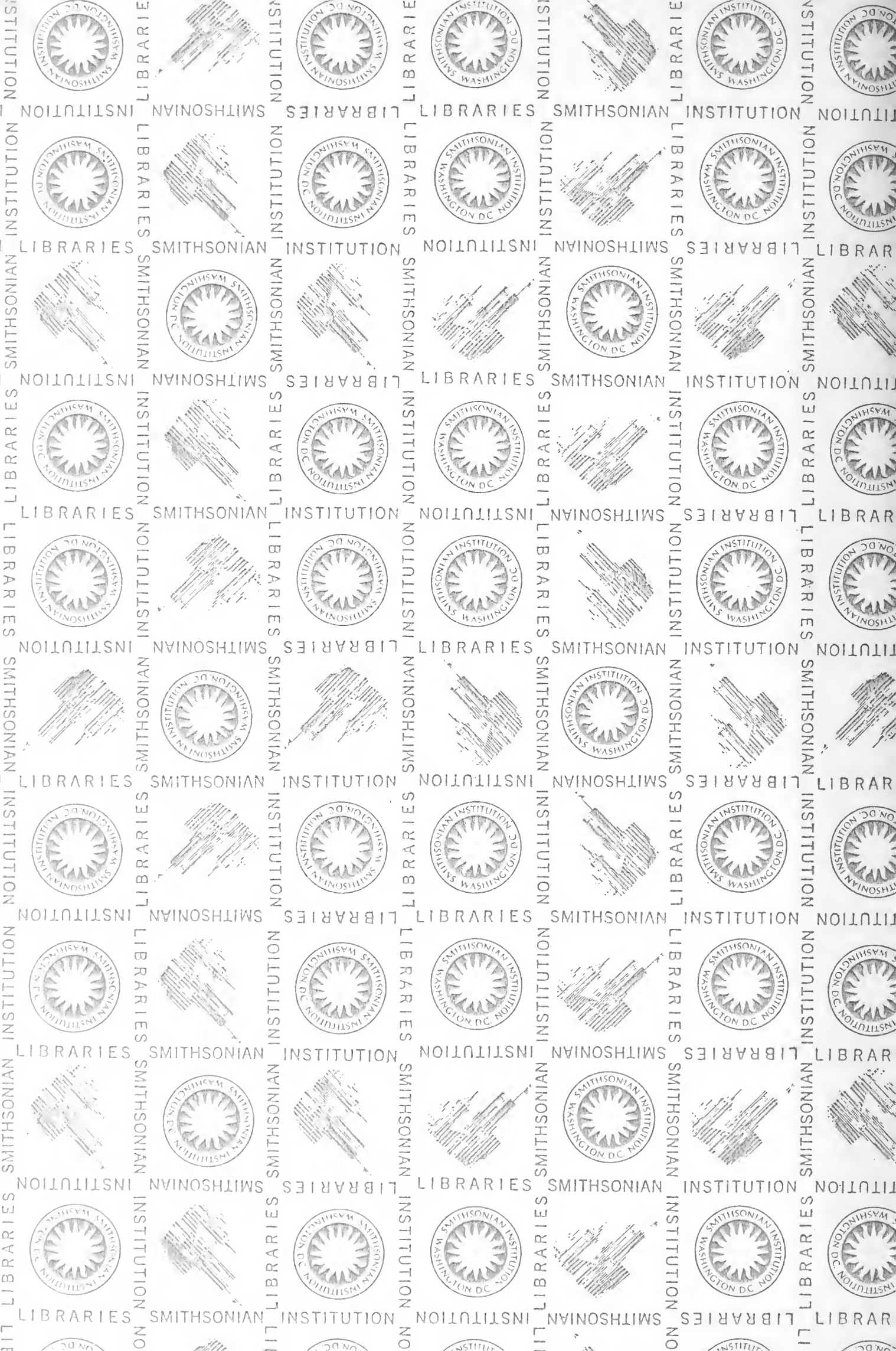
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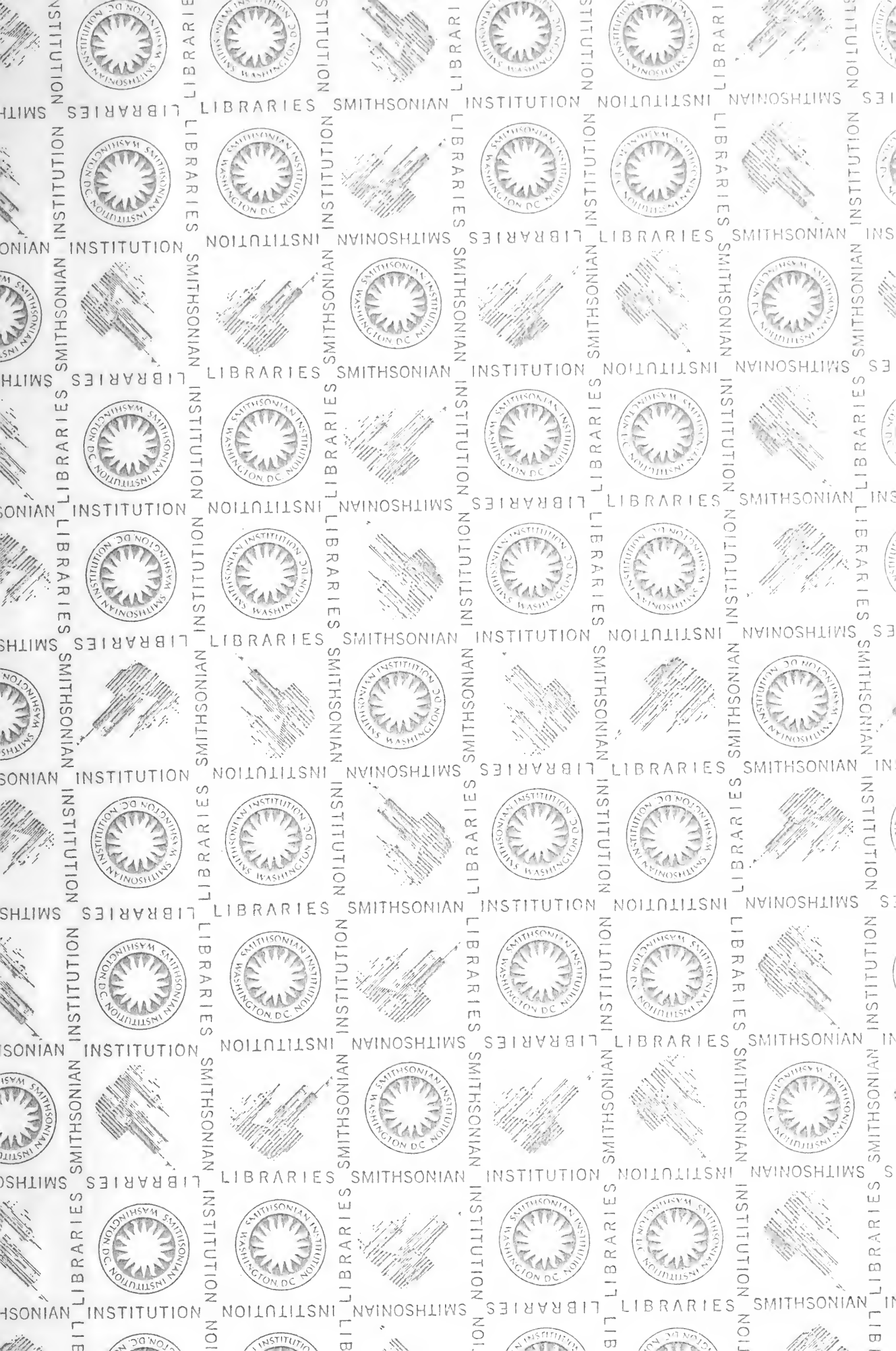
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